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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,966	12/12/2001	Thomas G. Roitsch	3524/012	3226

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EXAMINER

FOX, DAVID T

ART UNIT	PAPER NUMBER
1638	

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,966

Applicant(s)

ROITSCH, THOMAS G.

Examiner

David T. Fox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 45-88 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Applicant is notified that claims 58-59, 69 and 81-82 presented in the preliminary amendment of 12 December 2001 appear to be in error, for depending upon claims which do not provide antecedent basis for the terms recited in the dependent claims. For example, in claim 58, "the invertase" and "the organism" lack antecedent basis in claim 53, but have antecedent basis in claim 55. In claim 59, "the organism" lacks antecedent basis in claim 53, but has antecedent basis in claim 58. In claim 69, "male sterile plant" lacks antecedent basis in claim 65, but has basis in claim 67. In claim 81, "the saccharose synthase" lacks antecedent basis in claim 75, which recites "a saccharose transport system". In claim 82, "the cytoplasmically expressed invertase" lacks antecedent basis in claim 77, but has antecedent basis in claim 79.

The following restriction requirement is based upon the claims as originally presented in the preliminary amendment of 12 December 2001. Amendment of these claims to correct the errors above may result in the reassignment of these claims to different restriction groups.

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 45-48, 51-54, 60-61, 63-69, 73 and 86, drawn to a tobacco invertase promoter comprising SEQ ID NO:1, expression vectors containing the promoter ligated to a coding sequence such as a sequence encoding a nutritional protein, plant cells and plants containing it, and methods of its use to produce transformed plant cells and plants.

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Group II, claim(s) 49, drawn to a tobacco invertase promoter comprising SEQ ID NO:2.

Group III, claim(s) 50, drawn to a tomato invertase promoter comprising SEQ ID NO:3.

Group IV, claim(s) 55-59, 70-72, 74, 77, 80, 82-84 and 87, drawn to an expression vector comprising a tobacco invertase promoter comprising SEQ ID NO:1, operably linked to an invertase gene in sense or antisense orientation, for the production of male sterile plants and restorer plants.

Group V, claim(s) 62, drawn to an expression cassette comprising an invertase inhibitor-encoding sequence.

Group VI, claim(s) 75 and 81, drawn to an expression cassette comprising a saccharose synthase-encoding region.

Group VII, claim(s) 76 and 78-79, drawn to an expression cassette comprising an invertase coding sequence and a saccharose synthase coding sequence.

Group VIII, claim(s) 85, drawn to a method for in vitro embryogenesis using haploid or double diploid plants as starting materials.

Group IX, claim(s) 88, drawn to a PCR-based method of cloning promoters.

The inventions listed as Groups I-IX do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The claims are linked by the technical feature of plant transformation with an isolated pollen- and tapetum-specific invertase promoter. However, this feature is not special because it does not constitute an advance over the prior art. WO 98/41643 (SCOTTISH CROP RESEARCH INSTITUTE) submitted by Applicant teaches an isolated invertase promoter which is specific to pollen and anthers (which comprise tapetum), and plant transformation therewith (see, e.g., page 2, line 35 through page 3, line 14; page 3, lines 33-34; page 5, lines 11-21; page 5, line 33 through page 6, line 14; page 8 through page 9, line 17).

Furthermore, the inventions of Groups I-IX each involve physiologically and biochemically divergent starting materials and processes not required by the other, and so are not linked by a single special technical feature. The invention of Group I, a first product and process of use, involves coding sequences not involved in male sterility, such as nutritional protein-encoding sequences, not required by any other group. The inventions of Groups II and III, second and third products respectively, require individual sequences from different plant sources which are physiologically and biochemically divergent, and are not required by each other or any other group. The invention of Group IV, a fourth product, requires invertase coding sequences, antisense RNA-encoding sequences, and methods for determining male sterility and male fertility, each not required by any other group. The invention of Group V, a fifth product, requires an invertase inhibitor coding sequence, not required by any other group. The invention of Group VI, a sixth product, requires a saccharose synthase coding sequence not required by any other group except Group VII. The invention of Group VII, a seventh product, requires both a saccharose synthase coding sequence and an invertase coding sequence together, which combination is not required by any other group. The invention of Group VIII, a second process, requires haploid or double diploid starting materials and methods of in vitro embryogenesis, each not required by any other group. The invention of Group IX, a third process, requires PCR-mediated gene cloning methods, not required by any other group.

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Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

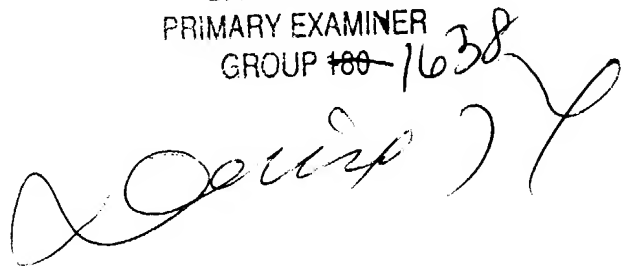
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (571) 272-0795. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached on (571) 272-0804. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

September 8, 2004

DAVID T. FOX
PRIMARY EXAMINER
GROUP ~~180~~ 1638

A handwritten signature in black ink, appearing to read "David T. Fox", is written over the printed name and title.